

Application No.: 09/683,298

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-4 [Cancelled]

Claim 5 [Currently Amended] An apparatus, comprising:

a plurality of deposit elements ~~constructed and arranged~~ to deposit biological materials on a depositing surface;

a first mounting assembly ~~constructed and arranged~~ to enable movement of the deposit elements around a first axis perpendicular to the depositing surface;

a second mounting assembly ~~constructed and arranged~~ to enable movement of the deposit elements around a second axis parallel to the depositing surface; and

a third mounting assembly ~~constructed and arranged~~ to enable movement of the deposit elements around a third axis parallel to the depositing surface.

6. [Original] The apparatus of claim 5, wherein:
the deposit elements include pins, quills, or jetting elements.
7. [Original] The apparatus of claim 5, wherein:
the second and third axes are perpendicular to each other.
8. [Original] The apparatus of claim 5, wherein:
the first mounting assembly is movable independently of one or both of the second and third mounting assemblies such that movement around the first axis is uncoupled from movement around one or both of the second and third axes, respectively.
9. [Original] The apparatus of claim 5, wherein:

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the second mounting assembly is movable independently of one or both of the first and third mounting assemblies such that movement around the second axis is uncoupled from movement around one or both of the first and third axes, respectively.

10. [Currently Amended] The apparatus of claim 5, wherein:
the depositing surface is a surface of a substrate; and
the apparatus further comprises a holding element ~~constructed and arranged~~ to hold the substrate.
11. [Original] The apparatus of claim 10, wherein:
the depositing surface is substantially flat.
12. [Currently Amended] The apparatus of claim 10, wherein:
the substrate includes a second substantially flat surface parallel and opposed to the depositing surface; and
the holding element includes a platen having a substantially flat surface ~~constructed and arranged~~ to conformingly receive the second surface of the substrate.
13. [Original] The apparatus of claim 12, wherein:
the substrate includes a microscope slide.
14. [Currently Amended] The apparatus of claim 5, further comprising:
one or more reference planes ~~constructed and arranged~~ for registering the deposit elements.
15. [Currently Amended] The apparatus of claim 14, wherein:
the depositing surface includes a top surface of a microscope slide; and
the one or more reference planes includes a yaw reference plane perpendicular to the first axis parallel to an edge of the microscope slide.
16. [Currently Amended] The apparatus of claim 5, further comprising:

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one or more securing elements ~~constructed and arranged~~ to secure the deposit elements at a first position with respect to movement around the first axis, a second position with respect to movement around the second axis, and a third position with respect to movement around the third axis.

17. [Original] The apparatus of claim 16, wherein:
the first, second, and third positions are determined so that biological materials are deposited from each of the deposit elements at substantially a ninety degree angle to the depositing surface.
18. [Original] The apparatus of claim 5, wherein:
the first mounting assembly includes one or more bearing surfaces concentric with the first axis.
19. [Currently Amended] The apparatus of claim 18, further comprising:
a gantry; and wherein
the first mounting assembly further includes a print head mount ~~constructed and arranged~~ to mount the first mounting assembly to the gantry, and a head mounting plate coupled to the deposit elements and including the one or more bearing surfaces.
20. [Original] The apparatus of claim 5, wherein:
the first mounting assembly provides yaw adjustment using two or more reference surfaces.
21. [Original] The apparatus of claim 20, wherein:
the yaw adjustment includes rotating the depositing elements about the first axis without additional translation in a plane parallel to the depositing surface.
22. [Currently Amended] An apparatus, comprising:
a first mounting assembly ~~constructed and arranged~~ to enable movement of biological deposit elements around a first axis;

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a second mounting assembly ~~constructed and arranged~~ to enable movement of the biological deposit elements around a second axis different from the first axis; and

a third mounting assembly ~~constructed and arranged~~ to enable movement of the biological deposit elements around a third axis different from the first and second axes.

Claims 23-33 [Cancelled]